

**PARTLY INTERLEAVED PHASED ARRAYS WITH DIFFERENT
ANTENNA ELEMENTS IN CENTRAL AND OUTER REGION**

ABSTRACT OF THE DISCLOSURE

The present invention relates to an antenna comprising a first antenna array. The first antenna array comprises one or more antenna elements of a first antenna element type in a first region of the antenna array, and a plurality of antenna elements of a second antenna element type in a second region of the antenna array. In one embodiment, the first region of the first antenna array is a central region, and the second region of the first antenna array is a region outside of the central region. In one embodiment, the first antenna array comprises a spacecraft antenna mounted on a spacecraft bus. In another embodiment, the first antenna array comprises a deployed antenna array on a spacecraft.

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